

Future Trends in IT and Telecom Standardizations

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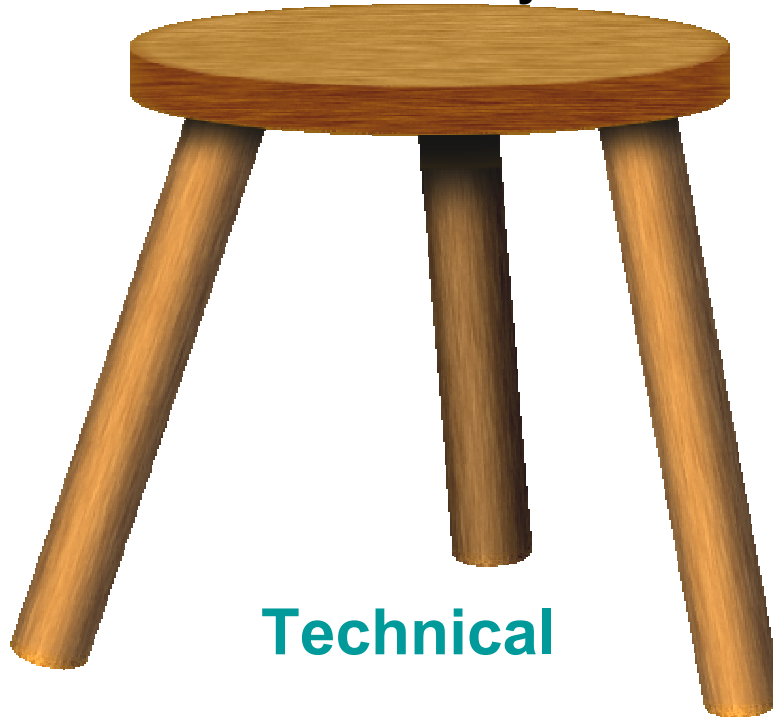
IT and Telecom Standards

Address User Needs

Interoperability

Quality

Security



People and
Markets

Technical

Process and its
Structure

IT and Telecom Industry/Standards - Trends

People and Markets

- **More User-oriented: Applications and technology**
- **Increasingly Competitive, Global markets**
- **Private financing critical; Reduced time to market**
- **New providers of equipment, applications and services**

Technical

- **Convergence of multiple technologies into integrated platforms/systems; distributed processing; miniaturization**
- **Increased processing speed and bandwidth**
- **Reduced product and application cycle time**
- **Need for the best, implementable, end-to-end solutions**

Process/Structure

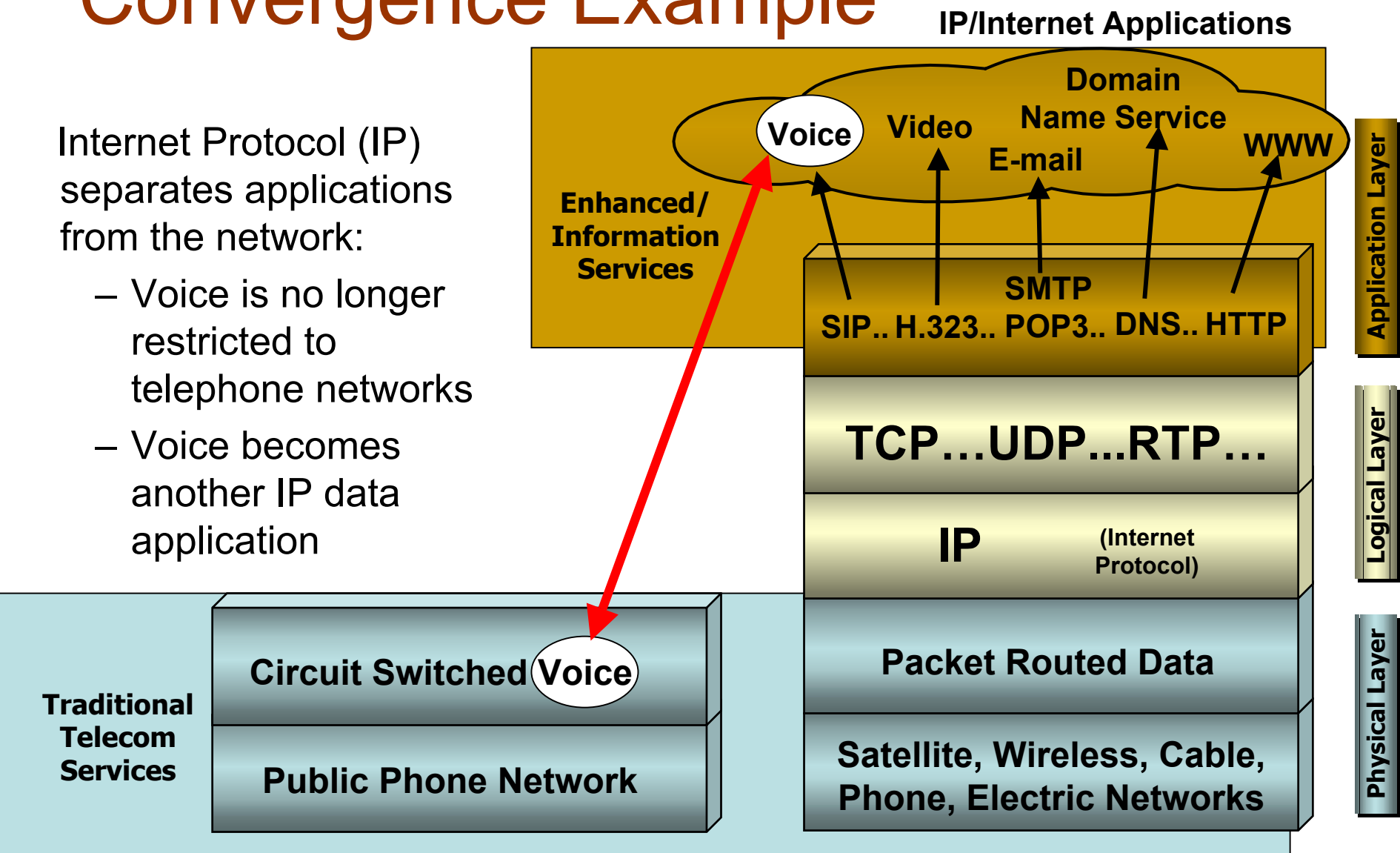
- **Use of electronic tools in drafting standards and achieving consensus**
- **Little “i” and Big “I” international standards bodies, forums and consortia**
- **Cooperation and collaboration of standards groups**



Convergence Example

Internet Protocol (IP) separates applications from the network:

- Voice is no longer restricted to telephone networks
- Voice becomes another IP data application



Administrations (96/2208)		ROAs (87/1783)		SIOs (167/1875)	
U.S.A.	342	NTT	188	Lucent	166+58 +
China	232	FT	184	Ericsson	147+5+
Germany	187	BT	148	Siemens	136+17+
France	106	DT	134	Nortel	91+51+
Russia	99	ATT	77	Alcatel	35+23+40+18+
U.K.	95	KDDI	69	CSELT	69
Canada	63	Telecom Italia	65	NEC	47
Japan	63	Swisscom	65	Nokia	46
India	62	KT	59	Fujitsu	42
Ukraine	58	Telenor	58	Telecordia	36
Italy	56	Royal KPN	58	Motorola	27+8
Syria	53	Telia	46	OKI	32
Korea	50	Telekom Austria	37	ETRI	32
Total:	1466 (66%)	Total:	1188 (67%)	Total:	1126 (60%)



Top Members participation (07/98-08/00)

Source: Houlin Zhao,
ITU TSB Director

Administrations (65/832) Members: 189	ROAs (63/461) Members: 163	SIOs (121/664) Members: 173	Associates (31/53) Members: 82
U.S.A. 144	FT 43	Nortel 29+12+12	eAccess 5
China 95	Telekomunikacja Polska 38	NTT 47 + 3	OFS Fitel 5
U.K. 55	China Telecom. Corp. 29	Alcatel 9+8+2+9+12+2+1	Opticom 3
Germany 45	BT 27	Cisco Systems 34	SwissQual 3
France 33	Deutsche Telekom 26	Siemens 25+1+5	Telekom Srpske 3
India 32	KDDI 19	ETRI 29	ACCA Networks 2
Brazil 31	Bharat Sanchar Nigam 18	Huawei Tech. 25	AULM 2
Syrian Arab Rep. 30	Telenor ASA 17	Lucent Tech. 12+9+1+2	ElectriPHY 2
Italy 29	AT & T 14	L.M. Ericsson 21+1	Harris 2
Canada 26	NTT DoCoMo 14	ZTE 21	Octasic Semicond. 2
Japan 25	Telecom Italia 13	Infineon 13+1+1+1	Okinasa Photonics 2
Korea (Rep. of) 22	TeliaSonera 13	NEC 12	Telchemy 2
Russian Federation 20	BELGACOM 11	Fujitsu 11	Teraburst Networks 2
Total: 587(70%)	Total: 282 (61%)	Total: 371 (56%)	Total: 35 (66%)



Top Members participation (2003)

Source: Houlin Zhao,
ITU TSB Director

ITU-T Membership

	12/00	Difference	12/01	Difference	12/02	Difference	12/03
Administrations	189	-	189	-	189	-	189
Operators/Service Providers	164	+15	179	-9	170	-7	163
Equipment Suppliers/Labs	213	+9	222	-15	207	-34	173
Associates	3	+27	30	+27	57	+25	82
Other entities	5	-1	4	+1	5	-	5
Other organizations	33	+2	35	+1	36	+6	42



Source: Houlin Zhao,
ITU TSB Director

Classification of Forums

(Objective Fields, Purpose)

Objective Fields \ Purpose	de facto standard	Pre-standard	Implementation specifics / Interoperability	Others	Total
Telecommunications	3(13%)	3(13%)	11(48%)	6(26%)	23
Infrastructure	1	2	5	2	
Mobile Communication System	1	1	4	4	
Access System	1	-	2	-	
Information Technology	8(24%)	6(18%)	15(44%)	5(15%)	34
Software	1	3	7	4	
PC	5	1	5	1	
LAN	2	3	3	-	
Service	7(16%)	0(0%)	8(19%)	28(65%)	43
Internet	2	-	3	6	
Multimedia	1	-	3	4	
EC	1	-	2	10	
ITS	-	-	1	5	
Home Network	3	-	1	0	
Total	18	10	36	36	100

World Summit on the Information Society

- Standardization is one of the essential building blocks of the Information Society.
- There should be particular emphasis on the development and adoption of international standards.
- The development and use of open, interoperable, non-discriminatory and demand-driven standards that take into account needs of users and consumers is a basic element for the development and greater diffusion of ICTs and more affordable access to them, particularly in developing countries.
- International standards aim to create an environment where consumers can access services worldwide regardless of underlying technology.

Implications of Trends on Industry and Standards

- Increased sensitivity to **user needs** and **synergies** between applications and technologies (need to be “close to customer”) to attract private investment
- Emphasis on **innovation** to achieve the **best, cost-effective, global solutions**
- New applications and new features or capabilities for existing applications will be introduced frequently to meet **market windows**
- **Strategic alliances and partnerships** between companies, and **cooperation/collaboration** between standards bodies and forums/consortia to produce complete solutions and acceptance
- **Economies of scale** in global markets will be important to support the **research (intellectual property creation)** required in the competitive global market where applications and products need to be user-friendly even if technically-sophisticated
- **Holders of intellectual property** will need to ask for **"reasonable" terms and conditions** so that they will not price the solution that uses their intellectual property out of the market.



Consequences

To address user and industry needs, technical standards and their processes will have to:

- Be **voluntary, consensus-based** and **global** to allow rapid responses to changes in a **competitive, dynamic, global market**
- **Open** and **driven by the private sector** who can work closely with individual customers to adapt to their needs and feedback
- Based on **standards work (normative references) and implementation support**, where appropriate, by other standards bodies, forums and consortia to deliver implementable, end-to-end solutions with quality and security
- Respect the **importance of innovation and research** and the resulting intellectual property in order to enable new solutions and capabilities

